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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/595,406

10/23/2006

Marco Di Meco

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20575

7590

07/22/2010

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EXAMINER

MOMPER, ANNA M

ART UNIT

PAPER NUMBER

3657

NOTIFICATION DATE

DELIVERY MODE

07/22/2010

ELECTRONIC

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

docketing@techlaw.com

<b>Office Action Summary</b>	<b>Application No.</b> 10/595,406	<b>Applicant(s)</b> DI MECO ET AL.	
	<b>Examiner</b> ANNA MOMPER	<b>Art Unit</b> 3657	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 11 June 2010.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-4,6,8-13,15,17 and 19 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-4,6,8-13,15,17,19 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                                | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftperson's Patent Drawing Review (PTO-948)                        | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## **DETAILED ACTION**

### ***Response to Amendment***

1. Amendment to the claims received 6/03/2010. Claims 1, 13, 17 and 19 have been amended. Claims 14, 16 and 18 have been canceled.

### ***Response to Arguments***

2. Applicant's arguments with respect to the rejection(s) of claim(s) 8-10, 12 and 15 under 103(a) have been fully considered and are persuasive, specifically in that the language of the claims requires the forming of the teeth prior to the coating of the teeth with a fabric. Therefore, the rejection has been withdrawn. However, upon further consideration, a new ground(s) of rejection is made in view of Jonen et al. (US 5,860,883) in view of Fujiwara et al. (US 5,171,190) and Meco et al. (US 2002/0015825 A1).

3. Applicant's arguments with respect to the claim 13 with regards to "directly contacting" have been considered but are moot in view of the new ground(s) of rejection.

4. Applicant's arguments filed 6/03/2010 have been fully considered but they are not persuasive.

Applicant argues with respect to Ito et al., that the resistant layer coated on the RFL treated fabric is merely a rubber composition that penetrates the fabric. The examiner disagrees, while the reference discloses that the fabric will be impregnated with the rubber the examiner maintains that the reference discloses "coating with a rubber composition" therefore placing a layer on the outside of the layer, of which some

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may impregnate but not all, thereby leaving a layer on the outside thus meeting the requirement of a "resistant layer".

Applicant further argues with respect to the combination of Meco that Meco discloses the use of a resistant layer being made of a fluorinated plastomer and adhered to a fabric layer, therefore Meco has no teaching or suggestion that the resistant layer is capable of adhering directly to and contacting the fabric. The examiner disagrees, while Meco does not explicitly disclose the resistant layer being located on the fabric without an adhesive, the examiner maintains that Ito et al. discloses a rubber composition of undisclosed material and that Meco discloses a resilient layer of fluorinated plastomer and even though Meco discloses the use of an adhesive, Ito et al., does not disclose an adhesive and one of ordinary skill in the art would find it obvious to try the use of the material taught by Meco as the resistant layer in the application of Ito et al. without the use of an adhesive, as taught by Ito. For this reason the examiner maintains that the combination of references disclose limitations as claimed.

***Claim Rejections - 35 USC § 112***

5. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

6. Claims 8-10, 12 and 15 are rejected under 35 U.S.C. 112, first paragraph, because the specification, while being enabling for having a belt with a plurality of teeth and fabric coated thereon, does not reasonably provide enablement for forming teeth of the belt prior to coating the teeth with a fabric. The specification discloses a belt having

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toothings and a coating of fabric, thereby providing support for the end product being claimed in product claims 1, etc. The specification further provides support for each component and the composition or forming of each individual component such as the chemical composition or the fabric being obtained by a 2x2 twill. The specification supports a resistant layer being applied on a fabric however fails to disclose the assembly of the overall components of the belt thereby failing to provide enablement as to how one of ordinary skill in the art is to form the belt teeth prior to the application of the fabric, as was argued in the interview on 5/27/2010, as the prior art disclosed the forming of the teeth after the coating of fabric.

***Claim Rejections - 35 USC § 103***

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

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9. Claims 1-4, 11, 17, and 19 rejected under 35 U.S.C. 103(a) as being unpatentable over Ito et al. (2004/0014544 A1) in view of Meco et al. (US 2002/0015825 A1) and further in view of Osako et al. (EP 1052425 A2).

As per claims 1, 17 and 19, Ito et al. discloses a toothed belt (40, 100), comprising a body (42, 102) and a plurality of teeth (50, 110);

Said teeth being coated with a fabric (62, 122);

Said fabric being treated with a liquid solution of RFL ([0075] Ln. 6-7) and successively coated on the outside with a resistant layer ([0075] Ln. 8-9); said resistant layer directly contacting and adhering to said fabric without an intervening adhesive layer between the resistant layer and the fabric ([0076]-[0087], no adhesives are used, heating and pressure are used to combine the layers together).

Ito et al. is silent as to the composition of the resistant layer coating the fabric, and therefore fails to explicitly disclose the resistant layer comprising a fluorinated elastomer and elastomeric material.

Meco et al. discloses a toothed belt (1) having a plurality of teeth (4) coated with a fabric (5) treated with a liquid solution of RFL ([0027]) and successively coated with a resistant layer (8) wherein said resistant layer comprises a fluorinated elastomer and an elastomeric material ([0028]); wherein said fluorinated elastomer is in an amount by weight of between 101 and 150 parts by weight with respect to said elastomeric material ([0031]).

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the belt of Ito et al. to include the resistant layer comprising

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fluorinated plastomer and an elastic material, as taught by Meco et al., for the purpose of selecting an appropriate material for providing required abrasion resistance and friction.

Ito et al. fails to explicitly disclose the fluorinated plastomer is formed for more than 50% by particles of average size smaller than 10 micrometers.

Osako et al. discloses a power transmission belt and method of manufacturing the power transmission belt with the concept of having fluorinated plastomer is formed by particles of average size smaller than 10 micrometers ([0062]-[0063]).

It would have been obvious to one of ordinary skill in the art at the time the invention to modify the resistant layer of Ito et al. to include plastomer particle configuration taught by Osako et al. in order to improve dispersion of the materials, thereby ensuring a consistent product and performance ([0063]).

As per claim 2, Meco et al. further discloses the fluorinated plastomer is polytetrafluoroethylene ([0033]).

As per claim 3, Meco et al. further discloses the elastomeric material comprises HNBR ([0033]).

As per claim 4, Meco et al. further discloses the elastomeric material comprises HNBR modified with a zinc salt of polymethacrylic acid ([0033]).

As per claim 11, Meco et al. further discloses the elastomeric material comprises HNBR ([0033]).

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10. Claim 6 is rejected under 35 U.S.C. 103(a) as being unpatentable over Ito et al. (2004/0014544 A1) in view of Meco et al. (US 2002/0015825 A1) and Osako et al. (EP 1052425 A2). and further in view of Di Meco et al. (EP 1,157,813).

Modified Ito et al. fails to explicitly disclose said resistant layer having a weight of between 50 and 80 grams per meter square.

Di Meco et al. teach a toothed belt having the concept of resistant layer having a weight of between 50 and 80 grams per meter square (see Table 1; mean density of 350-400 g/l with the specified thickness corresponds to weight of 80 grams per meter square which falls in the claimed range).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the combination of Modified Ito et al. to include the resistant layer weight taught by Di Meco et al. in order to provide optimal strength,

11. Claim 13 is rejected under 35 U.S.C. 103(a) as being unpatentable over Ito et al. (2004/0014544 A1) in view of Meco et al. (US 2002/0015825 A1) and further in view of Osako et al. (EP 1052425 A2).

As per claim 13, Ito et al. discloses a toothed belt (40, 100), comprising a body (42, 102) and a plurality of teeth (50, 110);

said teeth being coated with a fabric (62, 122);

said fabric being treated with a liquid solution of RFL ([0075] Ln. 6-7) and successively coated on the outside with a resistant layer ([0075] Ln. 8-9) via spreading (the resistant layer 8 is capable of being used in a situation wherein it is adhered to and directly contacting the teeth of the belt as well as applied by means of spreading, it is

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noted that these limitations are functional limitations and that the disclosed invention need only be capable of such a use and need not explicitly disclose those uses); said resistant layer directly contacting and adhering to said fabric without an intervening adhesive layer between the resistant layer and the fabric ([0076]-[0087], no adhesives are used, heating and pressure are used to combine the layers together).

Ito et al. is silent as to the composition of the resistant layer coating the fabric, and therefore fails to explicitly disclose the resistant layer comprising a fluorinated plastomer and elastomeric material.

Meco et al. discloses a toothed belt (1) having a plurality of teeth (4) coated with a fabric (5) treated with a liquid solution of RFL ([0027]) and successively coated with a resistant layer (8) wherein said resistant layer comprises a fluorinated plastomer and an elastomeric material ([0028]); wherein said fluorinated plastomer is in an amount by weight of between 101 and 150 parts by weight with respect to said elastomeric material ([0031]).

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the belt of Ito et al. to include the resistant layer comprising fluorinated plastomer and an elastic material, as taught by Meco et al., for the purpose of selecting an appropriate material for providing required abrasion resistance and friction.

Ito et al. fails to explicitly disclose the fluorinated plastomer is formed for more than 50% by particles of average size smaller than 10 micrometers.

Osako et al. discloses a power transmission belt and method of manufacturing the power transmission belt with the concept of having fluorinated plastomer is formed by particles of average size smaller than 10 micrometers ([0062]-[0063]).

It would have been obvious to one of ordinary skill in the art at the time the invention to modify the resistant layer of Ito et al. to include plastomer particle configuration taught by Osako et al. in order to improve dispersion of the materials, thereby ensuring a consistent product and performance ([0063]).

As per claim 13, Mecco et al. discloses a resistant layer (8) adapted to be adhered to and directly contact the teeth of a toothed belt (1) via spreading (the resistant layer 8 is capable of being used in a situation wherein it is adhered to and directly contacting the teeth of the belt as well as applied by means of spreading, it is noted that these limitations are functional limitations and that the disclosed invention need only be capable of such a use and need not explicitly disclose those uses) and comprising a fluorinated plastomer and an elastomeric material ([0028]); wherein said fluorinated plastomer is in an amount by weight of between 101 and 150 parts by weight with respect to said elastomeric material ([0031]).

Mecco et al. fails to explicitly disclose the fluorinated plastomer is formed for more than 50% by particles of average size smaller than 10 micrometers.

Osako et al. discloses a power transmission belt and method of manufacturing the power transmission belt with the concept of having fluorinated plastomer is formed by particles of average size smaller than 10 micrometers ([0062]-[0063]).

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It would have been obvious to one of ordinary skill in the art at the time the invention to modify the resistant layer of Meco et al. to include elastomer particle configuration taught by Osako et al. in order to improve dispersion of the materials, thereby ensuring a consistent product and performance ([0063]).

12. Claims 8-9, 10, and 12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Jonen et al. (US 5,860,883) in view of Fujiwara et al. (US 5,171,190) and Meco et al. (US 2002/0015825 A1).

As per claims 8-9 and 12, Jonen et al. discloses a process for fabricating a toothed belt (30) comprising:

- forming an elongate belt body (31) of an elastomeric material (Col. 10, Ln. 50-52), the belt having a first planar side and a second side opposite the first side (Fig. 3);

- forming teeth (46) along the second side (Fig. 3, Col. 10, Ln. 58-60);

- coating with a fabric (52, Col. 10, Ln. 64-67, Fig. 3);

- treating the fabric with a liquid solution of RFL to impregnate fibers of the fabric (Col. 13, Ln. 9-15, Ln. 28-30);

- coating the treated fabric with a resistant layer (Col. 13, Ln. 30-33);

- directly contacting and adhering the resistant layer to the fabric coated over the teeth (Col. 13, Ln. 28-33, layers are adhered together through end process of vulcanization).

- wherein the resistant layer is applied directly to the fabric via spreading (Col. 13, Ln. 31-33).

Jonen et al. fails to explicitly disclose the forming of the teeth prior to the coating of the fabric.

Fujiwara et al., discloses a toothed belt having teeth (4) formed in a body (2) having a plurality of resilient cords (3) and a fabric (5) coating said teeth. Fujiwara et al further discloses "the tooth part of the body is covered with the woven fabric to obtain the synchronous belt as shown in Fig. 1" (Col. 3, Ln. 63-65), thereby stating that the fabric is formed on the teeth. (It is noted that Fujiwara discloses "In detail, the synchronous belt...is obtained by a conventional method in which the rubber-cement treated woven fabric is wound on a toothed cylindrical mold, the tensile cords are spun there-around, an unvulcanized rubber sheet of a set thickness is wound thereon, and rubber is formed to tooth grooves of a dram..." (Col. 3, Ln. 65-Col. 4, Ln. 5) which discloses the fabric being located on the mold prior to the forming of teeth that the disclosure of "the tooth part of the body is covered with the woven fabric to obtain the synchronous belt as shown in Fig. 1", or the covering of a toothed part with a fabric would be understood by one of ordinary skill in the art to allow for the specific method disclosed).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to modify the belt of Jonen et al. to include covering the teeth with fabric, as taught by Fujiwara et al., for the purpose of providing a means of assembly of the belt.

Jonen et al. fails to explicitly disclose providing the treated fabric with a resistant layer comprising a fluorinated plastomer.

Meco et al. discloses a toothed belt (1) having a plurality of teeth (4) coated with a fabric (5) treated with a liquid solution of RFL ([0027]) and successively coated with a resistant layer (8) wherein said resistant layer comprises a fluorinated plastomer and an elastomeric material ([0028]); wherein said fluorinated plastomer is in an amount by weight of between 101 and 150 parts by weight with respect to said elastomeric material ([0031]).

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the belt of Ito et al. to include the resistant layer comprising fluorinated plastomer and an elastic material, as taught by Jonen et al., for the purpose of selecting an appropriate material for providing required abrasion resistance and friction.

As per claim 10, Jonen et al. discloses the body includes embedding a plurality of longitudinal filiform resistant inserts or cords (38) in the elastomeric material (Col. 10, Ln. 50-55, Fig. 3).

As per claim 13, Jonen discloses a resistant layer adapted to be adhered to and directly contact the teeth of a toothed belt via spreading (Col. 13, Ln. 28-33).

Jonen et al. fails to explicitly disclose providing the treated fabric with a resistant layer comprising a fluorinated plastomer.

Meco et al. discloses a toothed belt (1) having a plurality of teeth (4) coated with a fabric (5) treated with a liquid solution of RFL ([0027]) and successively coated with a resistant layer (8) wherein said resistant layer comprises a fluorinated plastomer and an elastomeric material ([0028]); wherein said fluorinated plastomer is in an amount by

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weight of between 101 and 150 parts by weight with respect to said elastomeric material ([0031]).

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the belt of Ito et al. to include the resistant layer comprising fluorinated plastomer and an elastic material, as taught by Jonen et al., for the purpose of selecting an appropriate material for providing required abrasion resistance and friction.

13. Claims 15-16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ito Jonen et al. (US 5,860,883) in view of Fujiwara et al. (US 5,171,190) and Meco et al. (US 2002/0015825 A1).

As per claims 15-16, Modified Jonen et al. fails to explicitly disclose the fluorinated plastomer is formed for more than 50% by particles of average size smaller than 10 micrometers.

Osako et al. discloses a power transmission belt and method of manufacturing the power transmission belt with the concept of having fluorinated plastomer is formed by particles of average size smaller than 10 micrometers ([0062]-[0063]).

It would have been obvious to one of ordinary skill in the art at the time the invention to modify the resistant layer of Modified Jonen et al. to include plastomer particle configuration taught by Osako et al. in order to improve dispersion of the materials, thereby ensuring a consistent product and performance ([0063]).

### ***Conclusion***

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14. Any inquiry concerning this communication or earlier communications from the examiner should be directed to ANNA MOMPER whose telephone number is (571)270-5788. The examiner can normally be reached on M-F 6:00-3:30 (First Friday Off).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Robert Siconolfi can be reached on (571) 272-7124. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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